

Knowledge and Beliefs of Lifestyle Diseases among Employed Adults - A cross sectional study in Udupi municipality, Karnataka, INDIA

Sabu K.M.¹, Shiny G.N.², Reshma B.³, Nagaraj K.⁴, Binu V.S.⁵

¹ Associate Professor & Head, Department of Health Information Management,
2 UG Student, Department of Health Information Management,

³ Assistant Professor, Department of Health Information Management,
Manipal College of Allied Health Sciences, Manipal University

⁴ Professor, Dept: Community Medicine, Kasturba Medical College, Manipal University

⁵ Senior Grade Lecturer, Department of Statistics, Manipal University, Manipal
sabu.km@manipal.edu

ABSTRACT

Background: Lifestyle diseases have emerged as one of leading cause of mortality across the world. Globally, by 2015 lifestyle disease cause a big economic burden in developing countries and some of the Asian countries will be worst affected countries.

Objectives: This study aimed to find out knowledge and beliefs among employed adults on selected lifestyle diseases. **Methods:** This was a cross sectional study in a semi-urban location of south India conducted in 2008. The sample consisted of 320 employed adults, selected by convenient sampling and interviewed using a validated structured questionnaire. **Results:** Majority has poor knowledge on risk factors of lifestyle disease (66.2%), poor knowledge on general causes of lifestyle diseases (42.8%) and 58% of respondents has poor knowledge in identifying lifestyle diseases. More than 50% of the subjects agreed; relaxation activities, stress management, regular physical activities and ample knowledge about health are required to prevent lifestyle disease. **Conclusion:** This study reveals that more emphasis should be laid on improving awareness about lifestyle diseases among all strata of population including educated and employed adults.

Keywords: Belief, Employed adult, Lifestyle disease, Knowledge.

INTRODUCTION

The 21st century has changed drastically, making non communicable and lifestyle diseases the major killer all over the world and there is a concern about lifestyle changes attributing to non communicable diseases (NCD) particularly in developing countries like India [1]. Lifestyle diseases are a result of an inappropriate relationship of people with their environment.

The onset of these lifestyle diseases is insidious, they take years to develop, and once encountered do not let themselves easily to cure. Lifestyle diseases are different from other diseases because they are potentially preventable, and can be lowered with changes in diet, lifestyle, and environment [2]. A report jointly prepared by World Health Organization and World Economic forum says India will incur an accumulated loss of \$236.6 billion by 2015 on account of unhealthy lifestyles and faulty diet [3].

The burden of lifestyle diseases are increasing in developing countries as they adopt western lifestyles; tobacco and alcohol use, high consumption of fat rich diet and reduced physical activities. Lack of awareness on lifestyle disease and its risk factors, causes and relationship with lifestyle pattern is a major cause for the increase of lifestyle diseases. Recognizing the burden and importance of controlling lifestyle diseases, this study was carried out with an objective to understand the knowledge and belief among employed adults on cause and prevention of lifestyle diseases.

MATERIALS AND METHODS

Study design and participants

This was a cross sectional study of 320 adults employed in various organizations in Udupi municipality in state of Karnataka, India selected by convenient sampling method during the period February to May 2008. Survey was carried out at eight teaching institutions, five nationalized banks, one call centre, and various government administrative organizations in Udupi municipality.

A content validated semi –structured questionnaire was used for this survey. A12-item questionnaire on knowledge and beliefs about lifestyle diseases and one tabular form of question to assess respondent's knowledge on different risk factors of selected thirteen lifestyle diseases were used. Knowledge of respondents was determined through assessing the ability to identify lifestyle diseases, basic understanding on general causes and risk factors of lifestyle diseases. Subjects were asked to identify the lifestyle disease from a list of thirteen diseases which they considered as a lifestyle disease, each disease carried a score of one and based on total score, subjects were categorized into poor (score of 0 - 5), average (6 - 9) and good (10 - 13). Knowledge on general causes of lifestyle disease was determined through a question containing five general causes of lifestyle disease with a score of one. Based on total score respondents were categorized into poor (score of ≤ 2), average (3) and good (4 – 5).

most of the subjects (78%) were pointed out their sedentary lifestyle and job stress as the reason for it.

Knowledge on risk factors of lifestyle diseases was measured by asking each respondent to identify the correct risk factors for all thirteen lifestyle disease from a list of fifteen risk factors. Each risk factor carried a score of one, respondents whoever selected the correct risk factors were given a score of one each and a score of one was also given to respondents who have not selected the wrong risk factor assuming that he/she is aware of the appropriate risk factors. Negative score was given for wrong selection of risk factors. Based on total score of fifteen for each disease, respondents were categorized into poor (score of ≤ 5), average (6 -9), and good (10 - 15).Four statements was used to determine the belief about prevention of lifestyle disease and measured on a five point Likert's scale (strongly agree, agree, neutral, disagree and strongly disagree). Analysis was carried out with the help of Excel spread sheet and results are reported in percentages.

RESULTS AND DISCUSSION

The demographic characteristics shows most of respondents were male (65.6%) which is an indication of usual high ratio of males as working adults in this region. Majority (76.5%) of respondents were aged between 20 and 39. Subjects include a high percentage of teaching professionals (49.4%) working in non-medical institutions as the study area has more number of teaching institutions, followed by call centers [Table 1].

Table 1 Demographic Characteristics

Characteristics	Number (%)
Gender	
Male	210(65.6)
Female	110(34.4)
Age(Years)	
20 – 29	153(47.8)
30 - 39	92(28.8)
40 - 49	40(12.5)
50 & above	35(10.9)
Profession	
Teaching	158(49.4)
Call centers	95(29.7)
Banking	27(8.4)
Administrative staff	10(3.1)
Other employees	30(9.4)

About general health aspects; 95.5% of subjects felt they are health conscious and 87.2% are physically at their best. Among subjects who were not physically fit

Majority of the respondent's awareness about lifestyle disease was gained from multiple sources with media (62.2%) and friends (46.9%) formed main sources of awareness, while 6.6% of respondents were unaware about lifestyle diseases. The overall knowledge of respondents to identify all 13 lifestyle diseases was found poor. Majority (58%) of subjects has poor knowledge (score ≤ 5) in identifying the lifestyle diseases and only 11.6% reported good knowledge (score 10-13) in identifying lifestyle diseases. Most of the respondents do not consider diseases such as chronic liver disease, chronic obstructive pulmonary diseases (COPD), renal diseases and acne as lifestyle disease. The reason could be the lack of awareness about these diseases among public. Our study shows knowledge about general causes of lifestyle diseases among majority of respondents were found poor (58.1%), while 30.3% has average and 11.6% has poor knowledge. Results also shows 42.8% of subjects understanding on general causes of lifestyle disease were found poor. Only 35% of respondents have good knowledge on general causes of lifestyle disease.

Table 2 shows the respondent's knowledge on risk factors of each lifestyle disease. It was assessed through subjects understanding about 13 lifestyle disease and its specific risk factors. Overall knowledge of subjects about risk factors of lifestyle disease was poor (66.2 %). Majority of respondent's knowledge about risk factors for osteoporosis (89.2%), arteriosclerosis (87.2%), chronic renal failure (86.6%), Alzheimer's disease (86.3%) and COPD (85.3%) was poor. on average only 14% of respondents had good knowledge on identifying risk factors of all lifestyle diseases. Even though cancer and stroke are commonly known diseases among public, knowledge on risk factors of such diseases was found very low, 2.5% and 7.5% respectively.

Belief on prevention of lifestyle diseases was measured through four statements about; regular health checkup is essential for prevention of lifestyle diseases, relaxation activities during working hours help in prevention of some lifestyle diseases, attending stress management program can prevent some lifestyle diseases and your knowledge and concern for health is ample to avoid lifestyle disease. Details are shown in table 3. Results shows respondents are aware of the need to prevent lifestyle diseases even though they do not have adequate knowledge on risk factors of lifestyle diseases.

Table 2 Knowledge of respondents on risk factors of lifestyle disease

Lifestyle Diseases	Poor N (%)	Average N (%)	Good N (%)
Acne	233 (72.8)	10 (3.1)	77(24.1)
Alzheimer's Disease	276 (86.3)	37(11.6)	7(2.2)
Arteriosclerosis	279 (87.2)	29 (9.1)	12(3.8)
Cancer	226 (70.6)	86(26.9)	8(2.5)
Chronic liver disease/Cirrhosis	221(67.1)	32(10)	67(20.9)
Chronic Obstructive Pulmonary disease (COPD)	273(85.3)	12(3.8)	35(10.9)
Diabetes	125(39.1)	60(18.8)	135(42.2)
Depression	146 (45.6)	141(44.1)	33(10.3)
Heart Diseases	132 (41.3)	120(37.5)	68(21.3)
Hypertension	135(42.2)	81(25.3)	104(32.6)
Nephritis/chronic renal disease	277 (86.6)	13(4.1)	30(9.4)
Osteoporosis	285 (89.1)	31(9.7)	4(1.3)
Stroke	232 (72.5)	64(20)	24(7.5)

Note: Scoring- Poor (0 – 5), Average (6 – 9), Good (10 -15)

Table 3 Belief on prevention of lifestyle disease among respondents

Beliefs	Strongly Agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	Strongly Disagree N (%)
Regular Health checkup	105 (32.8)	164(51.3)	35(10.9)	14(4.4)	2(0.6)
Relaxation Activities at work	92(29.7)	179(59.9)	34(10.6)	11(3.4)	4(1.2)
Stress Management program	42(13.1)	168(52.5)	76(23.8)	25(7.8)	9(2.8)
Knowledge & concern for health	65(20.3)	171(53.4)	60(18.8)	20(6.3)	4(1.3)

Discussion

The result of our study indicates overall level of knowledge among employed adults on different aspects of causes and risk factors of lifestyle disease were poor. This shows lack of proper awareness among public on various lifestyle disease, even they are health conscious. Majority of respondents were not able to identify the exact risk factors of commonly known diseases such as cancer and stroke.

A study conducted in United Kingdom points on concern about public understanding of well established causes of common five cancers [4] support the findings of this study. Smoking as a risk factor for development of cancer was not known among 50% of socio-economically disadvantaged populations in United States [5]. WHO identifies stroke as one of leading causes of morbidity and mortality worldwide and various studies shows knowledge on stroke is low among Indian population.

The results of our study supports the findings of a northwest India survey which shows 45% of study subjects were unable to identify brain as affected organ in stroke and 23% were not able to identify even a single risk factor of stroke [6]. Another study conducted in West Bengal also shows poor awareness

on risk factors and warning symptoms of stroke among stroke patients as well as general population [7]. Studies conducted in other countries also show similar results pointing towards lack of awareness on stroke and its risk factors among public [8,9].

In India, every year people with diabetes is increasing. It is a known fact that awareness on diabetes and risk factors were comparatively high among urban population than in rural population [10]. Findings of our study are in similar lines with studies conducted among urban adult population of Chennai, which shows awareness on diabetes, risk factors and preventive measures were generally poor; in one of the study, results shows that only 11.9% were able to tell obesity and physical inactivity as risk factors for diabetes [11,12]. Low awareness and knowledge about diabetes and its complication reported in many studies indicate lack of awareness and the significance of diabetes education [11,13].

Majority of respondent's beliefs and perceptions about prevention of lifestyle disease is good which could be due to their overall knowledge on general aspects of health. The result of our study and other similar studies gives an indication that the present health education system is not appropriate enough to impart knowledge on emerging diseases to public at large. There is a

significant lack of knowledge on emerging lifestyle disease even among educated and literate population.

LIMITATION

The results of our study are only an indication of overall awareness and knowledge of lifestyle disease. Since study population comprised of only 320 subjects, results of this study cannot be generalized for entire population. However, further studies need to be conducted on a bigger population to substantiate this study results.

CONCLUSION

This study results shows, overall there is a lack of awareness among different categories of employed adults. It signifies the importance of health care education to make people understand about risk factors & cause of emerging NCDs which is a major burden to our country. Study reveals that even people who are really health conscious need not necessarily have proper knowledge and awareness on causes and risk factors of emerging NCDs as well as its association with lifestyle. The contribution of media, government and healthcare organization in imparting awareness and health education on emerging non-communicable diseases need to be analyzed. More focused country-wide awareness and education programs which could reach all strata of population need to be designed.

REFERENCES

- [1] Thakur JS. (2005) Emerging Epidemic of Non Communicable Disease – An urgent need for control Initiative. Indian J Community Med, 30:103.
- [2] Lifestyle disease. Available at: <http://www.naturalhealthperspective.com> (last accessed June 20, 2009)
- [3] Kounteya, Sinha. (2008) Chronic diseases to cost India \$237b by 2015.Times of India , May 21.
- [4] Wardle J., J, Waller., N, Brunswick., MJ, Jarvis. (2001) Awareness of risk factors for cancer among British adults. Public health ,115:173- 174.
- [5] Patrick J., Loehrer., Heidi, A Greger., Morris Weinberger., Beverly Musick., Michael Miller., *et al.* Knowledge and beliefs about cancer in a socioeconomically disadvantaged population. Cancer; 68:1665 -71.
- [6] Jeyaraj D, Pandian., Ashish Jaison., Sukhbinder S Deepak., Guneet Kalra., Shivali Shamsher. (2005) Public awareness of warning symptoms, risk factors, and treatment of stroke in Northwest India. Stroke, 36: 644-8.
- [7] Kamlesh Das., Gouranga Prosad Mondal., Ashok Kumar Dutta., Bijoy Mukherjee., Bansi Badan Mukherjee. (2007) Awareness of warning symptoms

and risk factors of stroke in the general population and in survivors stroke. J Clinical Neuroscience, 14:12-16.

- [8] Mohammed A Al Shafee., Shyam S Ganguly., Abdullah R Al Asmi. (2006) Perception of stroke and knowledge of patient risk factors among Omani patients at increased risk for stroke. BMC Neurology, 6:38p.
- [9] Kamran S., A.B. Bener., D. Deleu., W Khoja., M Jumma. (2007) The level of awareness of stroke risk factors and symptoms in the Gulf Cooperation Council Countries: Gulf Cooperation Council Stroke Awareness Study. Neuroepidemiology, 29:235-242.
- [10] Ahmad Ayaz Sabri., Muhammad Ahad Qayyum., Naif Usman Saigol., Khurram Zafar., Fawad Aslam. (2007) Comparing knowledge of diabetes mellitus among rural and urban diabetics. McGill J Med, 10:87-89.
- [11] Murugesan. N., Snehalatha. C., Shobhana R., Roglic G., Ramachandran A. (2007) Awareness about diabetes and its complications in the general and diabetic population in a city in southern India. Diabetes Res Clin Pract, 77:433-437.
- [12] Deepa Mohan, Deepa Raj, CS. Shanthirani, Manjula Datta, NC. Unwin. (2005). Awareness and knowledge of diabetes in Chennai-The Chennai urban rural epidemiology study [CURES-9]. JAPI, 53:283-287.
- [13] Ali Reza Soltanian., Fatemeh Bahreini., Mohammad Afkhami Ardekani(2007) People awareness about diabetes disease and its complications among aged 18 years and older in Bushehr port inhabitants (Iran). Diabetes and Metabolic syndrome: Clinical Research and Reviews, 1:245-249.